

NEW RECORDS OF BUTTERFLIES FROM THE WEST INDIES

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ABSTRACT. In 33 person-days in the field, 503 specimens of butterflies were collected in the Cayman Islands and northern Lesser Antilles. Twenty-two species are reported for the first time from the islands of Anguilla, St.-Martin, St.-Barthélémy, Saba, St. Eustatius, and Nevis in the latter group (41 individual island records). Four species are reported for the first time from the Cayman Islands, as well as five new island records, bringing the number known from these islands to 44.

Additional key words: distribution, Cayman Islands, Lesser Antilles.

This paper deals with the Cayman Islands and the northern Lesser Antilles. It is based on two recent collections. Henderson collected on seven northern Lesser Antillean islands during 29 January-20 February 1987 (23 person-days), visiting Anguilla, St.-Martin, St.-Barthélémy, Saba, St. Eustatius, St. Christopher (St. Kitts), and Nevis. Her butterflies, now in the collections of Schwartz (AS) and Gonzalez (FLG), consist of 230 specimens. A visit during 27 November-1 December 1985 (10 person-days) to the Cayman Islands by Schwartz and Gonzalez resulted in 273 specimens. Voucher specimens of some species are in the Milwaukee Public Museum. Nomenclature selectively follows Riley (1975), Miller and Brown (1981), and Brown and Heineman (1972).

CAYMAN ISLANDS

Gonzalez and Schwartz collected primarily on Grand Cayman, and Gonzalez spent one day on Cayman Brac; we did not visit Little Cayman. Previous major contributions to knowledge of the Caymanian rhopaloceran fauna are Carpenter and Lewis (1943) and Askew (1980). Table 1 summarizes present knowledge of the fauna. Of the 44 Caymanian species, 19 are now known from all three islands. Most species (41) are known from Grand Cayman (14 from only that island), with 26 from Cayman Brac and 23 from Little Cayman. Inclusion of *Her-*

acrides machaonides (Esper) (Papilionidae) rests on D'Abrera (1981:32). But Carpenter and Lewis's comprehensive work is based on the same collection, and they did not mention such an important record. Because the situation is anomalous, we do not include this species in the numbers on the Cayman Islands. Following are supplementary notes on the species new to these islands.

Urbanus dorantes cramptoni Comstock (Hesperiidae). We collected 10 specimens (9 AS, 1 FLG) on Grand Cayman, a first report. Our series was secured at three widely separated localities (Boatswain Bay, Cayman Kai, Old Man Bay); the broad distribution of this skipper on Grand Cayman suggests that it is not an extremely recent adventive, although it must have arrived since Askew (1980) collected there in 1975.

Eurema elathea Cramer (Pieridae). This small-bodied species was recorded by Carpenter and Lewis (1943:377), and Askew (1980:128); both reported it only from Grand Cayman. Our four specimens (AS) from Cayman Brac are the first reported from that island; they were taken at the airport on the W end of the island.

E. daira palmira (Poey) (Pieridae). First reported from Little Cayman and Cayman Brac by Askew (1980:129). Our 6 specimens (5 AS, 1 FLG) are from 4 localities on Grand Cayman (George Town, Cayman Kai, Old Man Bay, Boatswain Bay).

Phoebis agarithe antillia Brown (Pieridae). "Authoritatively reported" but uncollected or unseen by Carpenter and Lewis (1943:372); record questioned by Askew (1980:131). We have 4 specimens from Grand Cayman (Boatswain Bay; 3 AS, 1 FLG) and 1 from Cayman Brac (airport, W end; AS).

Strymon martialis (Herrich-Schäffer) (Lycaenidae). Reported by both previous parties only from Little Cayman. We have 2 specimens (1 AS, 1 FLG) from Grand Cayman (Boatswain Bay) that constitute the first record for that island.

S. columella cybirus (Hewitson) (Lycaenidae). Askew (1980:127) reported this hair-streak from Grand Cayman and Little Cayman. Gonzalez collected 2 specimens (1 AS, 1 FLG) on Cayman Brac (airport, W end; Jennifer Bay), which constitute the first record for that island.

Electrostrymon a. angelia (Hewitson) (Lycaenidae). First record for this species from the Cayman Islands. A single male (AS) collected.

Hemiargus ceraunus filenus (Poey) (Lycaenidae). Known from Grand Cayman and Little Cayman (Carpenter & Lewis 1943:392; Askew 1980:128). Gonzalez took a single specimen (AS) on Cayman Brac (airport, W end).

Junonia genoveva zonalis Felder & Felder (Nymphalidae). As on Jamaica (Turner & Parnell 1985), there are two species of *Junonia* on the Cayman Islands: *J. genoveva* and *J. evarete*. We took both on Grand Cayman (Boatswain Bay; 5 AS), but only *J. g. zonalis* on Cayman Brac (airport, W end; 1 AS, 1 FLG). On Grand Cayman, interspecific contacts were of common occurrence. The two species are readily distinguished on the wing, both by phenotype and behavior; *J. evarete* is more easily approached and captured.

J. evarete (Cramer) (Nymphalidae). Widespread on Grand Cayman (George Town, Cayman Kai, Old Man Bay, Boatswain Bay; 8 AS, 3 FLG).

Anaea cubana (Druce). First record of this cuban species from the Cayman Islands (Grand Cayman). We took 16 specimens (10 AS, 6 FLG) at 2 localities (George Town, Boatswain Bay).

LESSER ANTILLES

Butterflies of individual Lesser Antillean islands were studied in the late 19th and early 20th centuries. Godman and Salvin (1884, 1896) and Hall (1936) reported on the butterflies of Dominica, St. Vincent and Grenada, and St. Christopher. Later, Pearce (1969) and Schwartz

TABLE 1. Known distribution of the 46 taxa (44 species) of Rhopalocera on the Cayman Islands.

Taxon	Distribution		
	Grand Cayman	Little Cayman	Cayman Brac
<i>Phocides pigmalion batabano</i>		X	
<i>Urbanus proteus domingo</i>	X		X
<i>U. dorantes cramptoni</i>	X		
<i>Cymaenes t. tripunctus</i>	X		X
<i>Hylephila p. phylea</i>	X		X
<i>Calpodes ethlius</i>	X		
<i>Panoquina p. panoquinoides</i>	X	X	X
<i>P. sylvicola</i>	X		
<i>Battus polydamas cubensis</i>	X		
<i>Heraclides aristodemus temenes</i>		X	
<i>H. a. tailori</i>	X		
<i>H. andraemon andraemon</i>		X	X
<i>H. machaonides</i>	X		
<i>Ascia monuste eubotea</i>	X	X	X
<i>Appias drusilla poeyi</i>	X	X	X
<i>Nathalis iole</i>		X	
<i>Eurema elathea</i>	X		X
<i>E. दौरa palmira</i>	X	X	X
<i>Pyrisitia messalina</i>	X		
<i>P. lisa euterpe</i>	X	X	X
<i>Abaeis nicippe</i>	X	X	X
<i>Phoebis s. sennae</i>	X	X	X
<i>P. agarithe antillia</i>	X		X
<i>Aphrissa neleis</i>	X		
<i>Strymon martialis</i>	X	X	
<i>S. acis casasi</i>		X	X
<i>S. a. gossei</i>	X		
<i>S. columella cybirus</i>	X	X	X
<i>Electrostrymon a. angelia</i>	X		
<i>Hemiargus ammon erembis</i>	X	X	X
<i>H. ceraunus filenus</i>	X	X	X
<i>Leptotes cassius theonus</i>	X	X	X
<i>Brephidium isophthalma thompsoni</i>	X		
<i>Agraulis vanillae insularis</i>	X	X	X
<i>Dryas iulia</i>	X		
<i>Heliconius charitonius</i>	X	X	X
<i>Junonia genoveva zonalis</i>	X	X	X
<i>J. evarete</i>	X		
<i>Anartia jatrophae jamaicensis</i>	X		X
<i>Siproeta stelenes insularis</i>	X		
<i>Phyciodes phaon</i>	X		
<i>Euptoieta hegesia</i>	X	X	X
<i>Anaea cubana</i>	X		
<i>A. verticordia danieliana</i>	X	X	X
<i>Danaus plexippus megalippe</i>	X		X
<i>D. gilippus berenice</i>	X	X	X
<i>D. eresimus tethys</i>	X		
Total	41	23	26

and Jimenez (1982) surveyed the butterflies of Barbados and Montserrat, respectively.

The only comprehensive work on the Lesser Antillean butterflies is that of Pinchon and Enrico (1969), the major source of Riley's (1975) Lesser Antillean records. All distributions below are from these two sources. Henderson collected on most of the northern Lesser Antilles. Collection notes on selected species follow.

Epargyreus z. zestos (Geyer) (Hesperiidae). Known from inner (St. Christopher) and outer (St.-Martin) chain islands and throughout the remainder of the Lesser Antilles to Grenada. One specimen (AS) taken on Saba, N of St. Christopher.

Polygonus leo savigny (Latreille) (Hesperiidae). Previously known only from the northern islands of St. Christopher and Montserrat. Collected on St.-Barthélémy (2 FLG, 2 AS). This is not only a northern extension in known range and a new island record, but the first record for the outer chain.

Urbanus proteus domingo (Scudder) (Hesperiidae). Widespread from Saba to Grenada. Not previously reported from St. Eustatius (1 AS), Nevis (1 FLG, 1 AS), or St.-Barthélémy (1 FLG, 1 AS).

U. obscurus (Hewitson) (Hesperiidae). Widespread from Saba and Antigua S to Grenada and Barbados. Not previously reported from Nevis, whence we have 2 specimens (1 FLG, 1 AS).

Pyrgus oileus (Linnaeus) (Hesperiidae). Three specimens (1 FLG, 2 AS) from Nevis fill in the previous gap between St. Christopher in the north and Montserrat in the south.

Wallengrenia ophites (Mabille) (Hesperiidae). Reported throughout the Lesser Antilles, from St.-Martin and St.-Barthélémy to St. Vincent. New records are St. Eustatius (1 AS), which lies between Saba and St. Christopher, and Nevis (1 AS) S of St. Christopher, whence *W. ophites* was known.

Hylephila phylea phylea (Drury) (Hesperiidae). Widely distributed from St.-Martin and St.-Barthélémy to Grenada and Barbados; not previously reported from St. Eustatius (1 AS) or Saba (1 AS) N of St. Christopher, the northernmost inner-chain island whence *H. p. phylea* has been reported.

Ascia monuste virginia (Godart) (Pieridae). Ranging from St.-Martin and Saba in the north to St. Lucia in the south. Previously unreported from Anguilla (1 FLG, 2 AS), St. Eustatius (2 FLG, 2 AS), and Nevis (1 AS).

Pyrisitia lisa euterpe (Ménétriés) (Pieridae). Widespread from St. Christopher and St.-Martin in the north to St. Lucia and Barbados in the south. Not reported from Anguilla (2 FLG, 2 AS), Saba (2 FLG, 2 AS), St. Eustatius (2 FLG, 2 AS) or Nevis (1 FLG, 2 AS). The first two islands are northern extensions in known range within both chains.

Eurema elathea (Cramer) (Pieridae). Broadly distributed from St.-Martin and St. Christopher to St. Lucia and Barbados. Not previously reported from Anguilla (3 FLG, 3 AS) N of St.-Martin.

Phoebis s. sennae (Linnaeus) (Pieridae). Although broadly distributed throughout the West Indies, including the Lesser Antilles, where it has been reported from St.-Martin and Saba in the north to Grenada and Barbados in the south, there are no published records for Anguilla (1 AS), to the N of St.-Martin. In the inner chain, we have specimens from St. Eustatius (1 AS) and Nevis (2 FLG, 1 AS), which fill the previous gap between Saba and Montserrat.

P. trite watsoni Brown (Pieridae). The only island known to harbor this species in the north is St. Christopher; on the more southern islands, it has been reported on Montserrat, Guadeloupe, Dominica, and St. Lucia. A single individual (AS) from Saba extends the known range from St. Christopher to the northernmost of the inner-chain islands.

Strymon bubastus ponce Comstock & Huntington (Lycaenidae). Reported from St.-Barthélémy and St. Christopher in the north to Grenada in the south. Its range extends as far N as Saba, whence we have 1 specimen (AS), and Anguilla, where Henderson took 6 (3 FLG, 3 AS).

Electrostrymon angerona (Godman & Salvin) (Lycaenidae). Occurs only on the inner-chain islands, from St. Christopher to Grenada. We have 1 specimen (AS) from Saba, thus "completing" its distribution on these northern islands.

Leptotes cassius chadwicki Comstock & Huntington (Lycaenidae). Widely distributed as far S as Grenada, records fill in the northern gaps in both the inner (Saba [5 FLG, 8 AS]), St. Eustatius [2 FLG, 4 AS], Nevis [1 FLG, 1 AS]) and outer (Anguilla [2 FLG, 3 AS]) chains.

Hemiargus thomasi woodruffi Comstock & Huntington (Lycaenidae). Previously known only from four Lesser Antillean islands, as well as Désirade. A single specimen (AS) from Nevis is a new island record, S of all other northern Lesser Antillean records.

Agraulis vanillae insularis Maynard (Heliconiidae). Although known from four outer-chain northern islands, reported only from St. Christopher in the inner chain. We have specimens from Saba (2 FLG, 2 AS) and St. Eustatius (2 FLG, 2 AS) confirming its occurrence on the northernmost of the inner-chain islands.

Junonia genoveva michaelesi Munroe (Nymphalidae). Widespread but unreported from Saba (1 FLG, 2 AS), St. Eustatius (1 AS), and Nevis (1 FLG, 1 AS) from the inner chain, and Anguilla (1 FLG, 2 AS) from the outer chain.

Anartia j. jatrophae (Johansson) (Nymphalidae). Widely distributed as far S as Grenada and Barbados, but unreported from Nevis (2 FLG, 2 AS). Remarkably, Henderson did not see this species on any other island, although it was moderately abundant on Nevis. Known only from Antigua in the outer-chain islands.

Biblis h. hyperia (Cramer) (Nymphalidae). In the northern islands, known only from St. Eustatius (where Henderson found it abundant on The Quill) and St. Christopher; Henderson took one specimen (AS) on Saba.

Antillea p. pelops (Drury) (Nymphalidae). Reported only from St. Christopher and Montserrat. We have one specimen from Nevis (AS), between the foregoing islands.

Anaea minor Hall (Apaturidae). Described from St. Christopher, reported from Antigua and Montserrat, as well as Guadeloupe. A specimen from Nevis (AS) fills in the gap between Montserrat and St. Christopher. Although Pinchon and Enrico (1969) reported these leaf butterflies from St.-Barthélémy, they stated that the population there tended toward the larger Puerto Rican *A. borinquenalis* Johnson & Comstock.

Although the above island records add no new species to the 74 (95 taxa) generally accepted from the Lesser Antilles, they add information on the distribution of 22 species on the northern Lesser Antilles.

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